

Claims

- Sub A)*
- [c1] 1. A method of adaptively controlling the speed of an automotive vehicle having a controller comprising:
detecting an object and generating an object profile;
detecting a future path of the automotive vehicle;
generating a predicted future path profile in response to said future path and said object profile; and
inhibiting a resume speed of the automotive vehicle in response to said predicted future path profile.
- [c2] 2. A method as in claim 1 further comprising continuously updating said predicted future path profile.
- [c3] 3. A method as in claim 2 wherein updating said predicted future path profile includes updating parameters selected from the following group comprising: object profile, yaw rate, street category, and upcoming future road paths.
- [c4] 4. A method as in claim 1 further comprising:
determining that said object is a stopped object;
adjusting automotive vehicle speed in relation to said stopped object; and
maintaining a safe operating distance between the automotive vehicle and said stopped object.
- [c5] 5. A method as in claim 1 further comprising assuming a future road condition selected from the following group comprising: road curvature, speed category, number of lanes, and road inclination is the same as a present road condition.
- [c6] 6. A method as in claim 1 wherein detecting the future path of the automotive vehicle comprises:
sensing yaw rate of the automotive vehicle and generating a yaw rate signal;
relating said yaw rate to road curvature; and
inhibiting resume speed of the automotive vehicle in response to said yaw rate signal.
- [c7] 7. A method as in claim 1 wherein detecting the future path of the automotive vehicle comprises using a navigation system to generate a navigation signal

including information selected from the following group comprising: automotive vehicle position, speed category, future path of the automotive vehicle, landmark location, road curvature, overhead object location, bridge location, construction zone, number of lanes, road type, and road inclination.

- [c8] 8. A method as in claim 1 wherein generating an object profile comprises storing object parameters selected from the following list comprising: relative distance from the automotive vehicle, object location relative to a road, and velocity of said object relative to the automotive vehicle velocity.
- [c9] 9. A method as in claim 1 wherein generating a predicted future path profile further comprises determining object location with respect to the future path of the automotive vehicle.
- [c10] 10. A method as in claim 1 wherein inhibiting the resume speed of the automotive vehicle further comprises inhibiting resume speed of the automotive vehicle while a present parameter selected from the following group comprising: road curvature, speed category, number of lanes, and road inclination remains constant.
- [c11] 11. A method of adaptively controlling the speed of an automotive vehicle having a controller comprising:
sensing yaw rate of the automotive vehicle;
generating a yaw rate signal; and
inhibiting resume speed of the automotive vehicle in response to said yaw rate signal.
- [c12] 12. A method as in claim 11 further comprising:
detecting an object and generating an object profile;
detecting a future path of the automotive vehicle and generating a predicted future path profile;
assuming a future road condition to be the same as a present road condition; and
inhibiting resume of the automotive vehicle in response to said object profile, said assumption, and said predicted future path profile.

- [c13] 13. A method as in claim 11 wherein detecting a future path of the automotive vehicle is in response to a navigation signal.
- [c14] 14. A method as in claim 11 further comprising adjusting the automotive vehicle speed in response to said object profile and said predicted future path profile to avoid a stopped object.
- [c15] 15. A method as in claim 11 wherein said controller in response to said object profile and said predicted future path profile signals a warning system.
- [c16] 16. A control system for an automotive vehicle comprising:
a detection system detecting an object, said detection system generating a object profile;
a navigation system generating a navigation signal; and
a controller electrically coupled to said radar system and said navigation system, said controller in response to said object profile and said navigation signal, generating a predicted future path profile and inhibiting resume speed of the automotive vehicle in response to said predicted future path profile.
- [c17] 17. A system as in claim 16 wherein said controller in generating a predicted future path profile determines an object location with respect to the future path of the automotive vehicle.
- [c18] 18. A system as in claim 16 wherein said controller determines said object to be a stopped object and adjusts the speed of the automotive vehicle in relation to said stopped object.
- [c19] 19. A control system for an automotive vehicle comprising:
a yaw rate sensor sensing yaw rate of the automotive vehicle, said yaw rate sensor generating a yaw rate signal; and
a controller electrically coupled to said yaw rate sensor, said controller inhibiting resume speed of the automotive vehicle in response to said yaw rate signal.
- [c20] 20. A system as in claim 19 further comprising:
a radar system detecting an object, said radar system generating an object

profile; and

a navigation system generating a navigation signal;
said controller electrically coupled to said radar system and said navigation
system, said controller in response to said object profile and said navigation
signal generating a predicted future path profile and inhibiting resume speed of
the automotive vehicle in response to said predicted future path profile.